

**AN ANNOTATED LIST OF TYPE SPECIMENS OF LEPIDOPTERA
DEPOSITED IN THE COLLECTION OF THE
INSTITUTE OF ZOOLOGY, SOFIA
I. BUTTERFLIES (LEP.: PAPILIONOIDEA)**

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A REVISION OF the Lepidoptera collection of the Institute of Zoology at the Bulgarian Academy of Sciences in Sofia allowed to find type material of four nominal species group taxa (46 specimens) of Papilionoidea (Nymphalidae). The collection contains type material of taxa described by M. Krzywicki, A. Slivov and Z. Varga.

The purpose of the present paper is to make this material available and to restore it for scientific circulation. The species group taxa names are arranged in systematic order. Each entry includes the species group name, followed by the original combination quoted from the original publication, type locality, type specimens as specified and notes about the type material and current taxonomic status.

The text of the label is quoted in double quotation marks (to assist better recognition, each label is provided with characteristics of the paper). Each line in the text of the label is separated by a slash “/”. In quotations of combined labels (handwritten on printed forms) the handwritten text is reproduced in *italics*; completely handwritten and completely printed labels are quoted in a plain character face.

SATYRINAE Boisduval, [1833]

Coenonymphini Tutt, 1896

magnocellata Krzywicki, 1967

“*Coenonympha oedippus magnocellata* ssp. n.” Krzywicki, M., 1967. Fauna Papilionoidea i Hesperioidea (Lepidoptera) Puszczy Bialowieskiej. *Annls. zool., Warsz* 25 (1): 110—111; pl. VIII: figs 1—5, 7—11, 13—23; pl. XXIX: figs 3, 7.

Type locality: [Poland]: Puszcza Bialowieska (Krzywicki, 1967: 111).

Paratypes:

- ♂ with labels: (1) handwritten (on white paper) “PUSZCZA BIALOWIESKA / 670 / 21 - VII - 1962 / leg. M. Krzywicki”; (2) handwritten (on white paper, red-violet coloured on the upper side) “*Coenonympha / oedippus / magnocellata / Krzywicki / Paratypus*”.
- ♂ with labels: (1) handwritten (on white paper) “PUSZCZA BIALOWIESKA / 670 / 18 - VII - 1962 / leg. M. Krzywicki”; (2) handwritten (on white paper) “Fauna P. B / tab. VIII. f. 3”; (3) handwritten (on white paper, red-violet coloured on the upper side) “*Coenonympha / oedippus / magnocellata / Krzywicki / Paratypus*”.

The type material, as it was originally stated (Krzywicki, 1967: 111), consists of holotype — ♂ (24 June 1960) and paratypes — 72 ♂♂, 31 ♀♀ with the following dates: allotype (paratype) — ♀ (30 June 1961); 23 June 1960 — 1 ♂; 24 June 1960 — 4 ♂♂;

6 July 1960 — 22 ♂♂, 15 ♀♀; 12 July 1960 — 1 ♂, 2 ♀♀; 30 June 1961 — 11 ♂♂, 7 ♀♀; 18 July 1962 — 6 ♂♂, 1 ♀; 21 July 1962 — 13 ♂♂, 4 ♀♀; 24 June 1963 — 1 ♂; 25 June 1963 — 3 ♂♂; 16 July 1963 — 1 ♂; 23 June 1964 — 9 ♂♂, 1 ♀ (all from Poland: Puszca Bialowieska, M. Krzywicki leg.); 3 ♂♂, 1 ♀ from 30 June 1961 are deposited in the collection of Instytut Zoologiczny PAN, Warszawa; the rest are in the collection of M. Krzywicki, Lublin. Unquestionably the 2 ♂♂ found in the collection of the Institute of Zoology, Sofia have been transferred subsequently. The second paratype is illustrated in Krzywicki (1967: p. 169: pl. VIII: fig. 3); erroneously dated June in the text explanation (l. c. p. 168).

This taxon has been originally described (Krzywicki, 1967: 110—111) as a different subspecies, *Coenonympha oedippus magnocellata* Krzywicki, 1967, endemic for Puszca Bialowieska, Poland.

Erebiini Tutt, 1896

ambicolorata Varga, 1971

“*Erebia pandrose ambicolorata* ssp. nova” Varga, Z., 1971. Die Erebiien (Lep.: Satyridae) der Balkanhalbinsel und der Karpaten III. Die Verbreitung und subspezifische Gliederung von *Erebia pandrose* (Bkh., 1788) nebst Beschreibung einer neuen Unterart: *E. pandrose ambicolorata* ssp. nova. *Acta biologica Debrecina* 9: 230—231; 235: fig. 5 ♂; 236: fig. 8 ♀.

Type locality: after holotype label “Rila-Gebirge, Malak Metschi Vrach (=Spitze), 2300—2470 m” (Varga, 1971b: 231) [Bulgaria: Rila Mts: Malak Mechi Vrah: 2300—2470 m], UTM grid reference 34TGM05; subsequently Abadjiev (1993: 61) erroneously stated “Rila Mts: Moussala Massif: 2200—2925 m”.

Paratypes:

– 9 ♂♂, 3 ♀♀ with labels: (1) printed (on white paper) “Rila, Malak meci / vr. 1.8.1969, Graße / Al Slivov, 2300m”; (2) red printed (on white paper, red framed) with handwritten inscriptions [in red] [here italicized] “*Paratypus / E. pandrose / ambicolorata*”.

Type material depositories originally are not stated (cf Varga, 1971b).

This taxon has been originally described (Varga, 1971b) and also recently treated (Varga, 1975: 10: fig. 4, 12: footnote, 13: fig. 7; Varga & Slivov, [1977]: 174; Ganev, 1985: 119; Abadjiev, 1993: 61; Abadjiev, 1995: pl. XV: figs 12, 13; 120; Jaksic, 1998: 15) as a different subspecies, *Erebia pandrose ambicolorata* Varga, 1971, endemic of the alpine belt of Rila Mts, Bulgaria.

HELICONIINAE Swainson, 1827

Argynnini Duponchel, [1835]

rilaensis Varga, 1971

“*Boloria pales rilaensis* ssp. nova” Varga, Z., 1971. A *Boloria pales* (Denis et Schiffermüller) és a *B. graeca* (Staudinger) (Lep.: Nymphalidae) taxonómiai tagolódása és elterjedése a Balkán-félszigeten. *Acta biologica Debrecina* 9: 215—216, 219: photos 5—8, 220.

Type locality: “Rila hg., Malak Mecsi Vrh 2300—2474 m” (Varga, 1971a: 215) [Bulgaria: Rila Mts: Malak Mechi Vrah: 2300—2474 m], UTM grid reference 34TGM05; in Varga & Slivov ([1977]: 170) and Abadjiev (1995: 56) erroneously given “2200—2500 m”.

Paratypes:

– 6 ♂♂, 2 ♀♀ with labels: (1) printed (on white paper) “Rila, Malak meci / vr. 1.8.1969, Graße / Al Slivov, 2300m”; (2) red printed (on white paper, red framed)

with handwritten inscriptions [in red] [here italicized] "*Paratypus / B. pales / rilaensis*".

- ♂ with labels: (1) printed (on white paper) "Rila, Malak meci / vr. 1.8.1969, Graße / Al Slivov, 2300m"; (2) printed (on red paper), double framed "PARATYPE ♂ / Boloria (Boloria) / pales rilaensis Varga, 1971 / [line] / label attachment S. Abadjiev, 1999".
- 2 ♀♀ with labels: (1) printed (on white paper) "Rila, Goljam meci / vr. 2.8.1969, Graße / Al Slivov, 2300m"; (2) red printed (on white paper, red framed) with handwritten inscriptions [in red] [here italicized] "*Paratypus / B. pales / rilaensis*".

A slight inaccuracy has been detected concerning the dates and type specimen's number of *Boloria pales rilaensis*. Originally Varga stated (1971a: 215): "Holotypus ♂... 1969. VIII. 2. leg. et. coll. Z.Varga. [Paratypes]: 21♂, 8♀ [same data and collection] ... 3♂, 1♀ [same data; in coll. Természettudományi Múzeum, Budapest], 2♂, 5♀, leg. Al. V. Slivov [in coll. Institute of Zoology, Sofia]" but on p. 219: figs 5—8 text explanation tells "1969. VIII. 3—5". Subsequently Varga & Slivov ([1977]: 170) write "4.VIII.1969 — 27 ♂♂ u. 19 ♀♀ /Holotypus und paratypen... /", including 5 more female paratypes. The specimen illustrated on fig. 5 in Varga (1971a: 219) appears to be the holotype. As an evidence of this statement a reprint of the original publication, available to me, has a handwritten inscription "HOLOTYPUS" (made by Z. Varga himself) to the right of the text explanation of fig. 5. As it can be seen the collection of the Institute of Zoology, Sofia, contains 7 ♂♂ and 4 ♀♀ paratypes and not the originally stated 2 ♂♂ and 5 ♀♀ (cf the above citation). Also there are 2 female paratype specimens labelled "Goljam meci / vr. 2.8.69...". It should be noted that the two peaks, Golyam Mechi Vrah (2618 m) and Malak Mechi Vrah (2474 m), are situated very near: on the north (the first one) and on the south (the second one) slope of Bistritsa Valley in the vicinity of the famous Makedonia Chalet in Rila Mountains. This fact makes collecting possible on both of them even in the same day.

The recently published (Tuzov, 1999: 231) 2 ♂♂ paratypes from the collection of Zoologische Sammlung des Bayerischen Staates, München differ greatly from the above mentioned type material. The first specimen is surely not a paratype; the date "[19]72.7.28—31" on the locality label shows a year later — 1972 than the date of the original description — 1971. The second one can be treated as a possible paratype (following the locality "Malak Meci/Vrach"), but it also bears an unusual date: 6 July — a somewhat too early appearance for the species in Bulgaria; the flight period here starts (even in good years) not earlier than the middle of July.

Boloria (Boloria) pales rilaensis Varga, 1971 has been treated (Varga, 1971a; Varga, 1975: 11: fig. 5, 14: fig. 8; Varga & Slivov, [1977]: 169—170; Ganey, 1985: 118; Abadjiev, 1992: 20; Abadjiev, 1995: 56; Slivov, 1995: 62; 64: fig. 3a; 66: fig. 5: 3, 4; 67; Abadjiev, 1997: 69, 70, 72; Jaksic, 1998: 17) as a different subspecies, high montane endemic of Rila and Pirin Mountains, Bulgaria.

rhodopensis Slivov, 1995

"*Boloria (S.) rhodopensis* sp. n." Slivov, A. V., 1995. A review of the species of the genus *Boloria* Moore, 1900 (Lepidoptera, Nymphalidae)... *Acta zool. bulg.* 48: 63—65.

Type locality: "West Rhodopes, Smoljan lakes, 1600 — 1700 m a.s.l." (Slivov, 1995: 66) [Bulgaria: W Rhodopi Mts: Smolyanski Ezera: 1600—1700 m], UTM grid reference 35TLG01; "Very recently special searches of locating the existence of the species (or other representative of the subgenus *Boloria*) in this area have been done; all of them proved negative... It is necessary to mention here the possible mislabelling of the specimens of the type series..." (Abadjiev & Beshkov, in print).

Holotype:

- ♂ with labels: (1) printed (on white paper) “Rodopi, h. Smol. / ezera, 1600 m / 13-14.7.79, Slivov”; (2) printed (on red paper), double framed “HOLOTYPE ♂ / Boloria (Smoljana) / rhodopensis Slivov, 1995 / Boloria (S.) rhodopensis sp. n. / Slivov, A. V., 1995 / (A review of the species... — / Acta zool. bulg. 48: 63) / [line] / label attachment S. Abadjiev, 1999”; (3) printed (on white paper) “Boloria (Boloria) graeca / (Staudinger, 1870) ♂ [handwritten] / S. Abadjiev det. 1999”; (4) printed (on white paper) “Gen. slide No. 1 / 2.XII.1999 / S. Beshkov prep. / [line] / Boloria (Boloria) graeca / (Staudinger, 1870) ♂ / S. Abadjiev & / S. Beshkov det. 1999”.

Paratypes:

- 17 ♂♂, 3 ♀♀ with labels: (1) printed (on white paper) “Rodopi, h. Smol. / ezera, 1600 m / 13-14.7.79, Slivov”; (2) paratype [11] with handwritten (on white paper) “gen. pr. [in cyrillic] / Nr / 901”; paratype [12] with handwritten (on white paper) “gen. pr. [in cyrillic] / Nr. / 902”; paratype [13] with handwritten (on white paper) “gen. pr. [in cyrillic] / Nr. / 903”; paratypeS [14] and [15] with handwritten (on white paper) “gen. pr. [in cyrillic] / Nr. / 904”; paratype [16] with handwritten (on white paper) “gen. pr. [in cyrillic] / Nr. / 905”; (3) all the paratypes with printed (on red paper), double framed “PARATYPE [number 1–20 respectively] ♂ [♀ respectively] / Boloria (Smoljana) / rhodopensis Slivov, 1995 / Boloria (S.) rhodopensis sp. n. / Slivov, A. V., 1995 / (A review of the species... — / Acta zool. bulg. 48: 63) / [line] / label attachment S. Abadjiev, 1999; (4) all the paratypes with printed (on white paper) “Boloria (Boloria) graeca / (Staudinger, 1870) ♂ [♀ respectively] [handwritten] / S. Abadjiev det. 1999”.

This taxon has been found taxonomically identical with *Boloria (Boloria) graeca balcanica* (Rebel, 1903); the name *Boloria (Smoljana) rhodopensis* Slivov, 1995 is a junior subjective synonym of *Boloria (Boloria) graeca balcanica* (Rebel, 1903) (Abadjiev & Beshkov, in print).

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